Substitute Specification

METHOD AND SYSTEM FOR DATA TRANSFER BETWEEN INTERACTIVE PUBLIC TERMINALS AND PERSONAL ELECTRONICS

CROSS-REFERENCE TO RELATED U.S. APPLICATIONS

Not applicable.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

Not applicable.

NAMES OF PARTIES TO A JOINT RESEARCH AGREEMENT

Not applicable.

REFERENCE TO AN APPENDIX SUBMITTED ON COMPACT DISC

Not applicable.

BACKGROUND OF THE INVENTION

1. Field of the Invention

[0001] The invention relates to a method and system for transferring data from a public terminal to personal electronics. In particular, the data is a ringtone, voicemail message, game, or screensaver, including sounds, images, and programs. The data is represented on the public terminal by an icon on the public electronic terminal. The public terminal is interactive and downloads the data as selected for each personal electronic device.

2. Description of Related Art Including Information Disclosed Under 37 CFR 1.97 and 37 CFR 1.98.

[0002] Until now, there are two known methods for personalizing electronic devices, such as cellular phones.

[0003] First, the user may contact a telephone service center. The automated answering service or customer service operator receives an access code from the user for the desired data. For example, the user sends a text of the access code from their cellular phone for a special ringtone downloaded to that cellular phone. This method is expensive because of the high costs of this kind of data connection and because of the relatively long waiting times for obtaining the requested data. Additionally, there is a lack of reliability and restricted volume of transfers limited by the number of customer service operators. The full product catalogue is also not available without providing the particular access code.

[0004] Second, the user may communicate with an Internet site for reviewing the catalogue and inputting the access code. This method requires a bank card or credit card and special equipment for connecting the personal electronic device to a computer. There is a concern for security of the financial information, and the special equipment for connecting a cellular phone to a computer is always not readily available and easily accessed.

BRIEF SUMMARY OF THE INVENTION

[0005] Therefore, the invention is aimed at implementing a data transfer method and system for use by the public and overcoming the above-mentioned drawbacks.

[0006] The invention relates to a method for transferring data between at least one electronic terminal and at least one personal electronic device. The data can include sounds, images, text, and programs to personalize the electronic device. The electronic device can be a cellular phone or mp3 player. For example, the method includes adding a ringtone to a cellular phone. The method includes:

inputting reference information to an interactive public terminal, the references possibly including a telephone number, brand of personal electronic device, model of personal electronic device;

selecting data from a menu on the interactive public terminal, the data corresponding to a personalization element for the personal electronic device described in the reference information, the personalization elements possibly including sounds, images, text, and programs, the menu being formed by icons or logo icons;

settling a payment amount corresponding to the selected data of the personalization element, the interactive public terminal having a payment peripheral installed thereon; and

transmitting the selected data to the interactive public terminal via a communication network, the selected data being transferred from the interactive public terminal to the personal electronic device.

[0007] This invention also relates to a computer program or operating software with program code portions for carrying out the steps of the method of the present invention.

[0008] The present invention also relates to a system for transferring data between at least one electronic terminal and at least one personal electronic device. The data can include sounds, images, text, and programs to personalize the electronic device. The electronic device can be a cellular phone or mp3 player. For example, the system can add a ringtone to a cellular phone. The system includes:

at least one public terminal, each terminal including:

a storing means containing operating software and data, the data being related

to the menu, icons, and data for the personalization element, the storing means being centrally located in each terminal;

means for interacting with a user, the icons and the menu being interactive with the user through data-selection and reproduction peripherals;

means for communicating with an operating center via a communication network, the operating center having the selected data sent to the public terminal; and

a mass storage means for containing the storing means within the public terminal;

at least one personal electronic device, each device having means for reproducing the selected data as received; and

means for transmitting the selected data to the personal electronic device.

[0009] The method and system of the present invention has the following additional advantages for the user:

personalization of a personal electronic device in an ergonomic interface or touch screen, the personalization being set in a few seconds;

direct payment to the public terminal by known payment methods;

presentation of a full capacity of products in the menu and ease of renewal and modification of contents of the menu; and

reducing costs by eliminating inefficiencies of the prior art.

[0010] The method and system of the present invention has the following additional advantages for the operator:

increased reliability of the personal electronic device because there is no mechanical part moving during the method;

improved variability ob the menu and the data because the public terminal can be updated and amended by the operating center;

absence of fees to be paid on technology in the public terminal; and

safety, wherein the sensitive portions of the technology are protected.

[0011] The features and advantages of the invention will become clear when reading the following detailed description of at least one preferred embodiment of same given by way of a non-restrictive example and shown in the attached drawings.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0012] Figure 1 is a schematic view of the installation according to the invention.

[0013] Figure 2 is a schematic view of the data exchange between the main subunits of the terminal according to the invention.

DETAILED DESCRIPTION OF THE INVENTION

[0014] The invention relates to a method for transferring data D between at least one electronic terminal B1, Bn and at least one personal electronic device (T1, Tn). The data D can include sounds, images, text, and programs to personalize the electronic device. The electronic device T1 can be a cellular phone or mp3 player. For example, the method includes adding a ringtone to a cellular phone.

[0015] The method includes inputting reference information to an interactive public terminal B1. The reference information includes a telephone number, brand of personal electronic device T1,

model of personal electronic device T1. The personal electronic device T1 is the device to be personalized by the data D.

[0016] The method also includes selecting data D from a menu on the interactive public terminal B1. The data D corresponds to a personalization element for the personal electronic device T1 described in the reference information. The personalization elements possibly including sounds, images, text, and programs, the menu being formed by icons or logo icons.

[0017] The method further includes settling a payment amount corresponding to the selected data D of the personalization element. The interactive public terminal B1 has a payment peripheral installed thereon.

[0018] The method finally includes transmitting the selected data D to the interactive public terminal B1 via a communication network R1. The selected data D is transferred from the interactive public terminal B1 to the personal electronic device T1.

[0019] According to another feature of the method according to the invention, the interactive public terminal B1 has a volatile memory MV to allow searching and review of the data D before inputting the reference information of the personal electronic deviceT1. The volatile memory MV is contained in a mass storage peripheral of the interactive public terminal B1. The interactive public terminal B1 includes software for operation, including software for presenting a sample of the selected data D for review on the interactive public terminal B1.

[0020] In this respect, it should be noted that such searching can be accomplished prior to a first input of the reference information of a personal electronic device T1.

[0021] According to a preferred embodiment, such searching is ensured at each activation of the

interactive public terminal B1.

[0022] Another feature of the invention is searching according to the personal electronic device T1. The reference information for the personal electronic device T1 can be input into the interactive public terminal B1, so that the menu only presents compatible data D for personalization.

[0023] The method also includes presenting a preview of the selected data D. Before selecting the specific data D, the interactive public terminal reproduces the visual or sound of the personalization element as a sample. The reproduction PR in the interactive public terminal B1 allows a user to select the data D after a direct sample of the experience.

[0024] With regard to the transfer of the selected data D to the personal electronic device T1, the transfer can be direct from the public terminal B1 to the personal electronic device T1, as shown in Figures 1 and 2. The data D can be present at the public terminal B1, having a transmitting means ER in Figure 2. The public terminal B1 is arranged so as to ensure such a transfer via a telecommunication network R1.

[0025] According to a preferred embodiment of the invention, the public terminal B1 does not contain the actual data D, but rather only a visual and/or audio sample. Such a sample cannot be transferred or used by the personal electronic device T1, avoiding any unauthorized use of the data D. In fact, the data D transferred to the personal electronic device T1 is either present at the level of an operating center CE, in particular, at the level of a server, or generated from special data (for example, masters) present at the level of such an operating center CE, namely a server.

[0026] The method then consists in that, prior to the transmission of the selected data D to the personal electronic device T1, a designation of the selected data D is first transmitted via a second

telecommunication network R2 between the public terminal B1 to the operating center CE. The selected data D transmits from the operating center CE via telecommunication networks R1, R2 based upon the designation of the selected data D to the personal electronic device T1.

[0027] In this respect, it should be noted that the designation of the selected data D can be completed by association with information related to the references of the personal electronic device T1, such as the brand name, model, or phone number, identity of the operator, identity of the user, payment information, or even means for identifying the public terminal B1 receiving the reference information by the user. The transmission of the information to the operating center CE can be ensured in an encoded or encrypted way. This information can be used, namely at the level of the operating center CE, in order to ensure a follow-up of the quality of the service, to ensure tracking, to proceed to invoicing (or to a re-invoicing, for example to an operator), to proceed to statistical studies, to prepare an order (namely of an electronic type for the selected data) or the like.

[0028] According to another feature, the invention also relates to a computer program including program-code portions for carrying out the steps of this data-transfer method. This computer program is, at least partly, comprised of the above-mentioned application software and is designed capable of automatically controlling this method as well as the interfaces, peripherals and other technical means implemented by this method.

[0029] The present invention also relates to a system for transferring data D between at least one electronic terminal B1 and at least one personal electronic device T1. The data D can include sounds, images, text, and programs to personalize the electronic device T1. The electronic device T1 can be a cellular phone or mp3 player. For example, the system can add a ringtone to a cellular

phone by the method described herein.

[0030] The system includes at least one public terminal B1. Each terminal B1 includes a storing means containing operating software and data. The data relates to the menu, icons, and data D for the personalization element. The storing means is located in a central unit of each terminal B1. There is a means for interacting with a user, the icons and the menu being interactive with the user through data-selection PS and reproduction peripherals PR. The terminal B1 also includes a means for communicating with an operating center CE via a communication network R2, such as a communication interface MO. A modem can also be used. The terminal B1 further includes a mass storage means for containing the storing means within the public terminal. The mass storage means containins the operating software and the data D transferred at each activation and/or at each switching on of the terminal B1 to the storage means of the central unit.

[0031] The system also includes at least one personal electronic device T1. Each device T1 has means for reproducing the selected data D as received.

[0032] The system further includes a means for transmitting the selected data D to the personal electronic device T1 via another telecommunication network R1.

[0033] In fact, each terminal B1 includes a central unit comprising a PC-compatible master card, a PC-compatible processor MC, for example of the type P3 500 MHz, storage means.

[0034] Such storage means of each terminal B1 are defined, at least partly, by a volatile memory MV, such as a RAM, for example with a 256 Mb capacity.

[0035] This volatile memory MV is aimed at containing, when the terminal B1 is operating, the operating software as well as the data D regarding the services offered. The operating software and

these data D are transferred to this volatile memory MV at each activation of the public terminal B1, even before an input of reference information of one or several personal electronic devices.

[0036] In fact and as mentioned above, the data regarding the services offered can be recorded at the level of the terminal B1 in a form capable of being transferred directly to a personal electronic device T1 and used directly by the latter.

[0037] To this end, the public terminal B1 includes means ER arranged so as to ensure directly a transmission of the selected data D to the personal electronic device T1 via a telecommunication network R1, as can be seen in Figures 1 and 2.

[0038] Such transmission means ER can be formed, for example, by a transmitter/receiver such as a GSM or the like.

[0039] According to a preferred embodiment, the data D, regarding the services offered, contained, as the case may be, at the level of the mass storage peripheral or at the level of the volatile memory MV, are formed by visual and/or sound representations or samples of the specific data likely to be selected, but in no way by data directly usable by a personal electronic device T1. This sample data is only contained or generated at the level of the operating center CE.

[0040] The public terminal B1 includes further means for transmitting MO a designation of the selected data D to the operating center CE a second communication network R2. The operating center CE then includes means for transmitting, for example a GSM transmitter/receiver, the selected data D to the personal electronic device T1 via the first communication network R1, based on the designation of received by these data.

[0041] According to another feature of the system according to the invention, the storage means of

each terminal B1 are defined, at least partly, by a non-volatile memory MN including an encrypting key for the identifiers of the subunits of the terminal and means for loading ST the operating software and the data. Downloading MO the information from the operating center CE re-calculated, at each loading or downloading, and compared with the stored key in order to authorize, or not, its operation.

[0042] Such a non-volatile memory MN is of the EEPROM type, for example with a 2 Mb capacity.

[0043] With regard to the peripherals for selecting PS and reproducing PR the data D of each terminal B1, they can be formed by means of a touch screen.

[0044] Another embodiment consists in that the peripheral for selecting PS the data D can be a keyboard, and the peripheral for reproducing PR same can be a display and loudspeakers.

[0045] As regards the mass storage peripheral, containing the operating software and the data D, it can be of the type hard disk and/or DVD/CD drive LE associated with a DVD/CD ST.

[0046] In fact and according to a preferred embodiment, such a mass storage peripheral is preferably designed so as to allow a quick replacement and/or updating of the software and or the data. This peripheral is preferably designed, at least partly, removable, and this in an easy way. Thus and according to a preferred embodiment, this peripheral is comprised of a DVD/CD drive associated with an interchangeable DVD/CD.

[0047] Each terminal B1 includes a peripheral for cash payment by coins, bank-notes etc.; for card payment by a credit card, magnetic card or the like; and for voucher payment by a prepaid voucher (number, promotional code, scrap card, publicity coin...) or one of any other type.

[0048] Each terminal B1 further includes:

means adapted to send, at regular time intervals, an operating report to the operating center CE as well as a statement on its operation and/or an event log;

means adapted to input and send cellular phone messages by voice or by text; and

means adapted to input and send photographs by webcam.

[0049] The first communication network R1 can be of the hertzian type, namely GSM, GPRS, UMTS, of the switched type or of any other type.

[0050] The second communication network R2 can be of the hertzian type, namely GSM, GPRS, UMTS, of the switched type or of any other type.

[0051] The communication networks R1 and R2 can be one and the same.

[0052] The terminal B1 can be fully autonomous with regard to the electric-current supply by electric batteries or solar panels. The communication network connection the networks R1 and R2 can be wireless connections.

[0053] The general operation of the software of each terminal is as follows:

at the start, the loading software (loader) tests the validity of the equipment, thanks to the data contained in the non-volatile memory MV;

when the equipment is validated, the loader transfers the operating software, or application software and the data from the mass memory to the volatile memory;

if not, the system is declared corrupted and the loader is stopped; and

the loader then passes hands to the application, which then allows an interactive use of the terminal.

[0054] The general operation of the application is as follows :

it controls the display, the input and the peripherals of the system;

the user generally proceeds to selections among the choices proposed on the screen by designated them, for example, with his finger in the case of using a touch screen;

the payment depends on the requested service;

the detection of the coins is performed by the coin device, but the counting is performed by the application; and

once the payment has been validated, the data and the controls forming the service are sent directly or indirectly, to the terminal T1 selected via networks R1 and/or R2.

[0055] The software is modular as to its basic configuration and new modules can be added. Of course, the invention is not limited to the embodiments described and shown, for which other variants can be foreseen, in particular:

the type and the number of subunits and peripherals associated with a data terminal;

the type and the number of operating software and of data contained in the storage memories;

the type and the number of personal electronic devices to be selected;

the type and the number of operating centers within the framework of a centralized or regionalized configuration; and

the type and the number of communication networks used and to extend the system to other applications.